

1  
0  
1  
1

Fig. 2

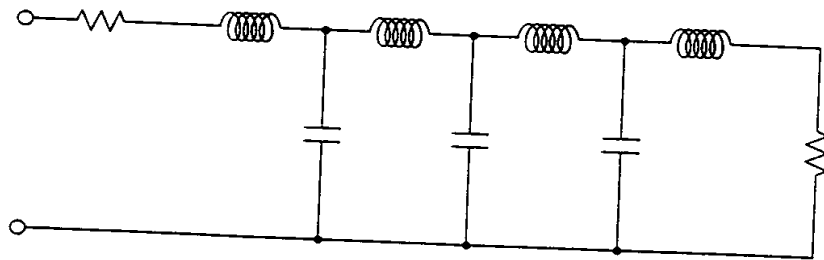


Fig. 3

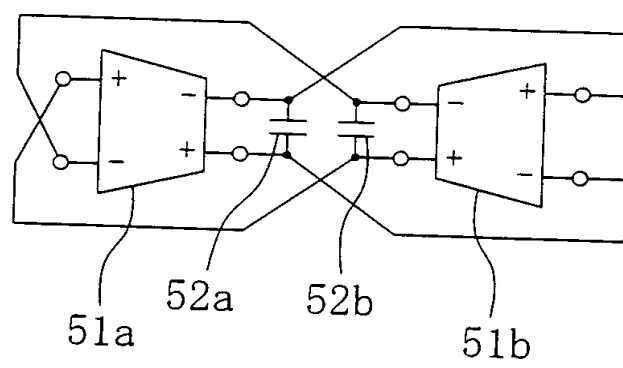


Fig. 4

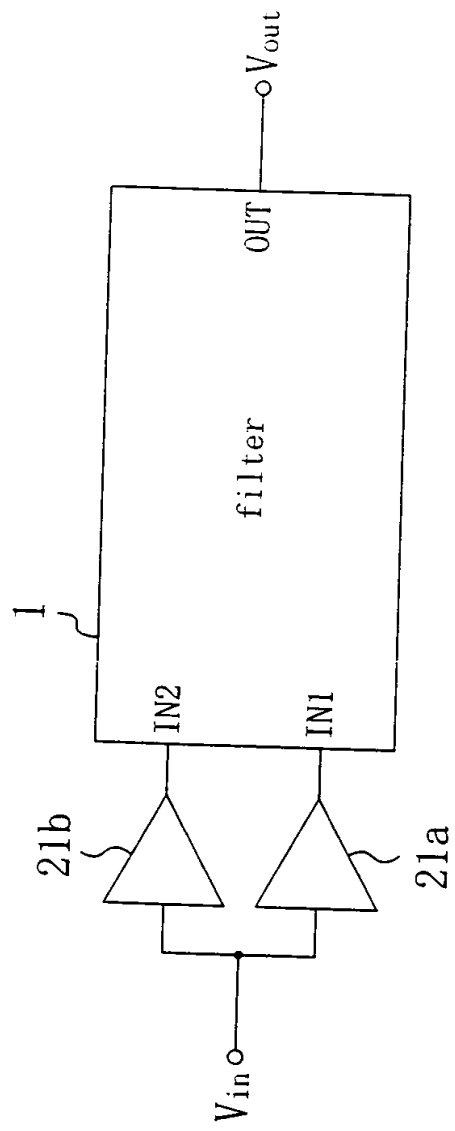


Fig. 5

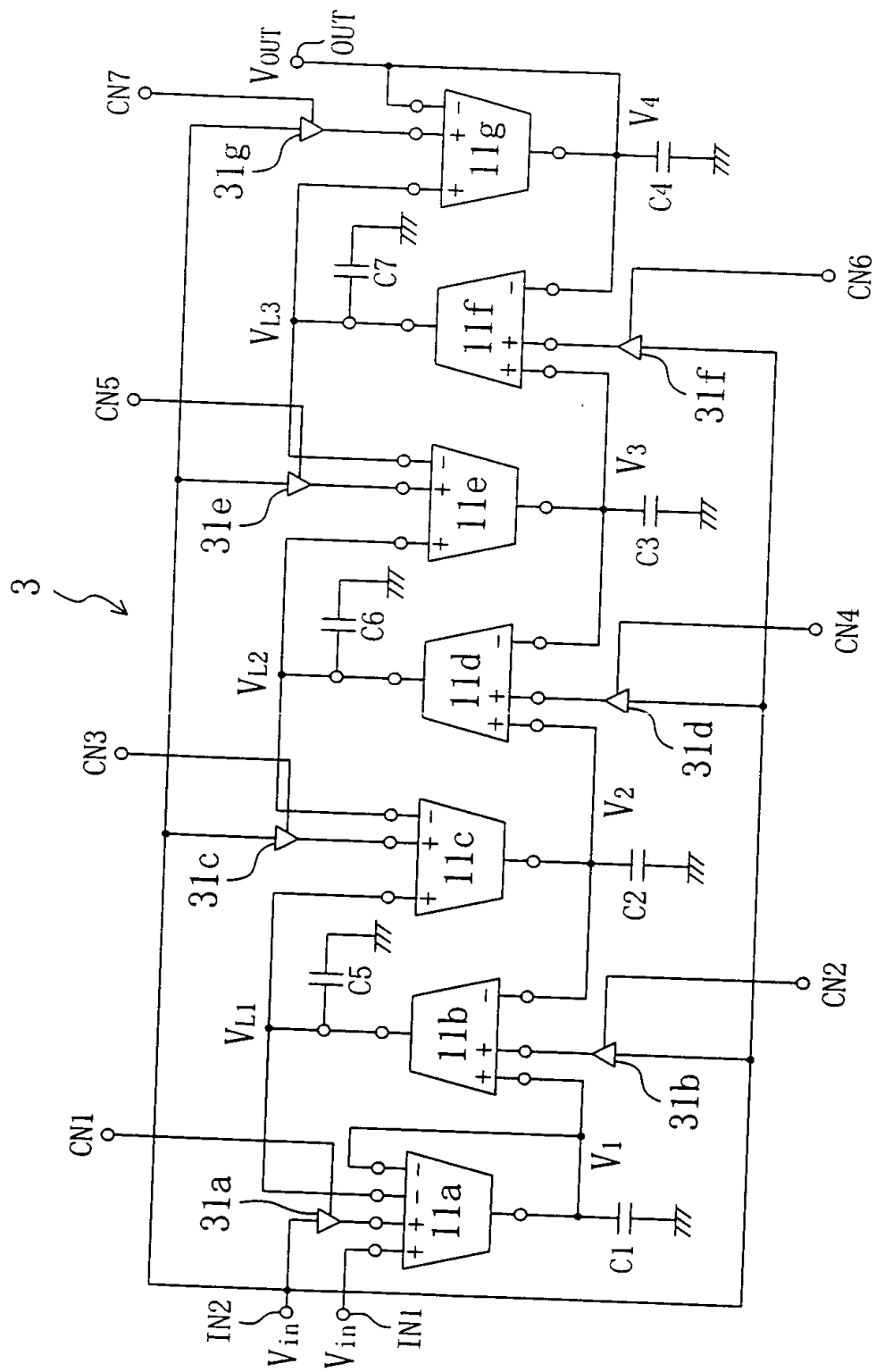


Fig. 6

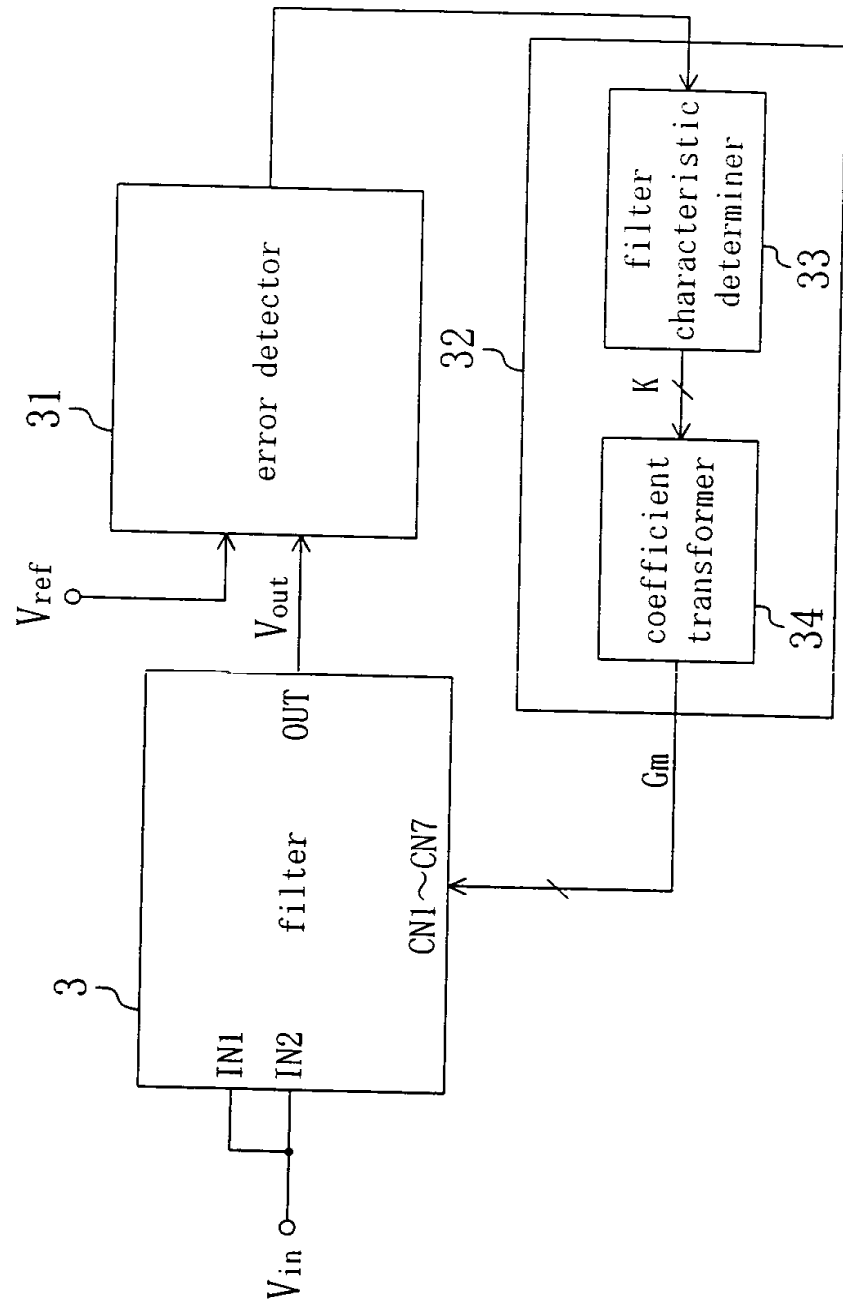


Fig. 7

$$H_n(s) = \begin{matrix} \begin{matrix} \downarrow \\ G_m \end{matrix} & \begin{matrix} \begin{matrix} \text{gm6} \\ \text{gm5} \\ \text{gm4} \\ \text{gm3} \\ \text{gm2} \\ \text{gm1} \\ \text{gm0} \end{matrix} \end{matrix} & \begin{matrix} \begin{matrix} \text{a66} & \text{a65} & \text{a64} & \text{a63} & \text{a62} & \text{a61} & \text{a60} \\ 0 & \text{a55} & \text{a54} & \text{a53} & \text{a52} & \text{a51} & \text{a50} \\ 0 & 0 & \text{a44} & \text{a43} & \text{a42} & \text{a41} & \text{a40} \\ 0 & 0 & 0 & \text{a33} & \text{a32} & \text{a31} & \text{a30} \\ 0 & 0 & 0 & 0 & \text{a22} & \text{a21} & \text{a20} \\ 0 & 0 & 0 & 0 & 0 & \text{a11} & \text{a10} \\ 0 & 0 & 0 & 0 & 0 & 0 & \text{a00} \end{matrix} \end{matrix} & \begin{matrix} \begin{matrix} \downarrow \\ A \end{matrix} & \begin{matrix} \begin{matrix} s^6 \\ s^5 \\ s^4 \\ s^3 \\ s^2 \\ s^1 \\ s^0 \end{matrix} \end{matrix} \end{matrix} \downarrow S$$

Fig. 8

$$\begin{array}{c}
 \left( \begin{array}{c} K6 \\ K5 \\ K4 \\ K3 \\ K2 \\ K1 \\ K0 \end{array} \right) = \left( \begin{array}{cccccccc} a66 & a65 & a64 & a63 & a62 & a61 & a60 \\ 0 & a55 & a54 & a53 & a52 & a51 & a50 \\ 0 & 0 & a44 & a43 & a42 & a41 & a40 \\ 0 & 0 & 0 & a33 & a32 & a31 & a30 \\ 0 & 0 & 0 & 0 & a22 & a21 & a20 \\ 0 & 0 & 0 & 0 & 0 & a11 & a10 \\ 0 & 0 & 0 & 0 & 0 & 0 & a00 \end{array} \right)^T \left( \begin{array}{c} gm6 \\ gm5 \\ gm4 \\ gm3 \\ gm2 \\ gm1 \\ gm0 \end{array} \right) \downarrow Gm \\
 \downarrow A
 \end{array}$$



Fig. 9

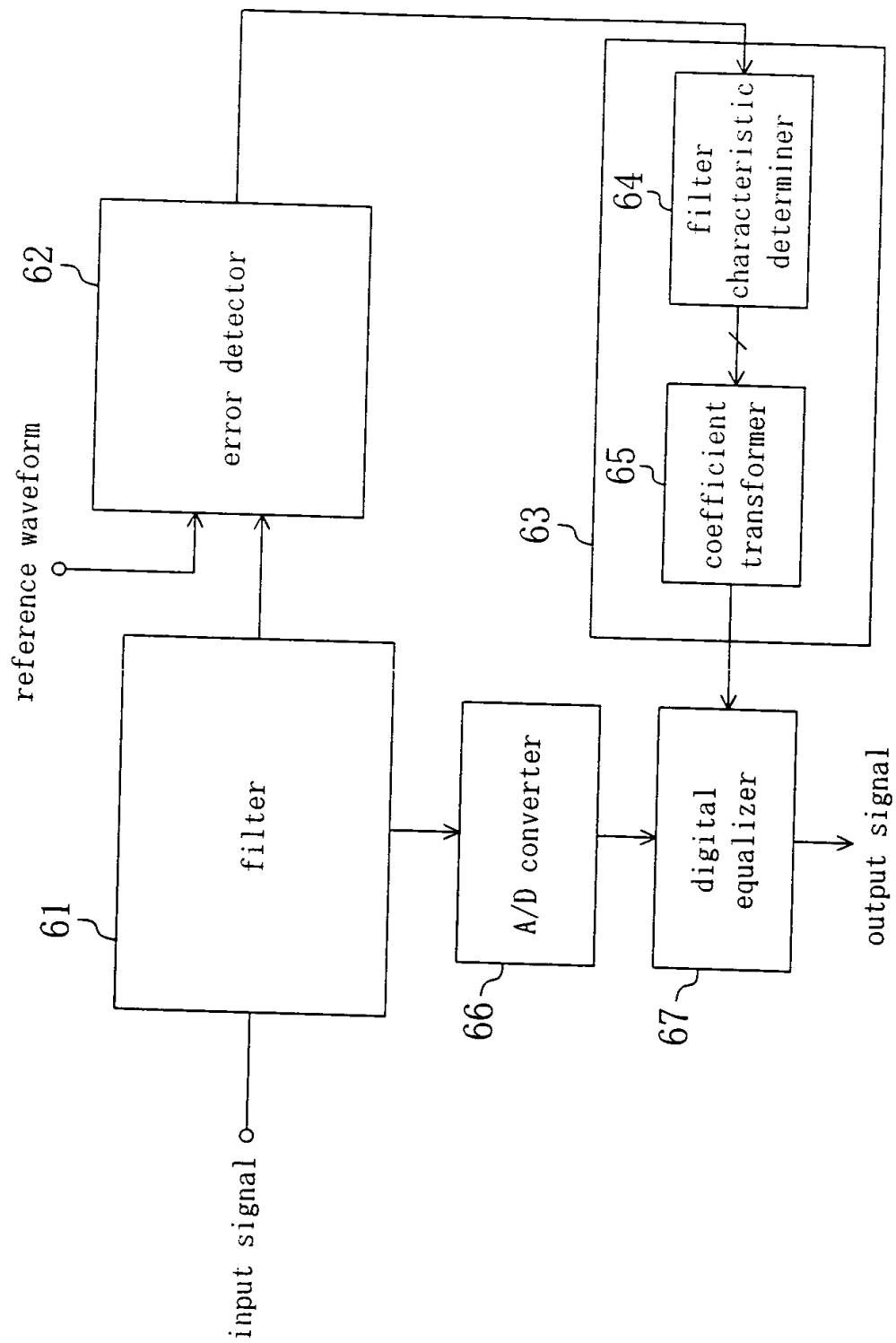


Fig. 10

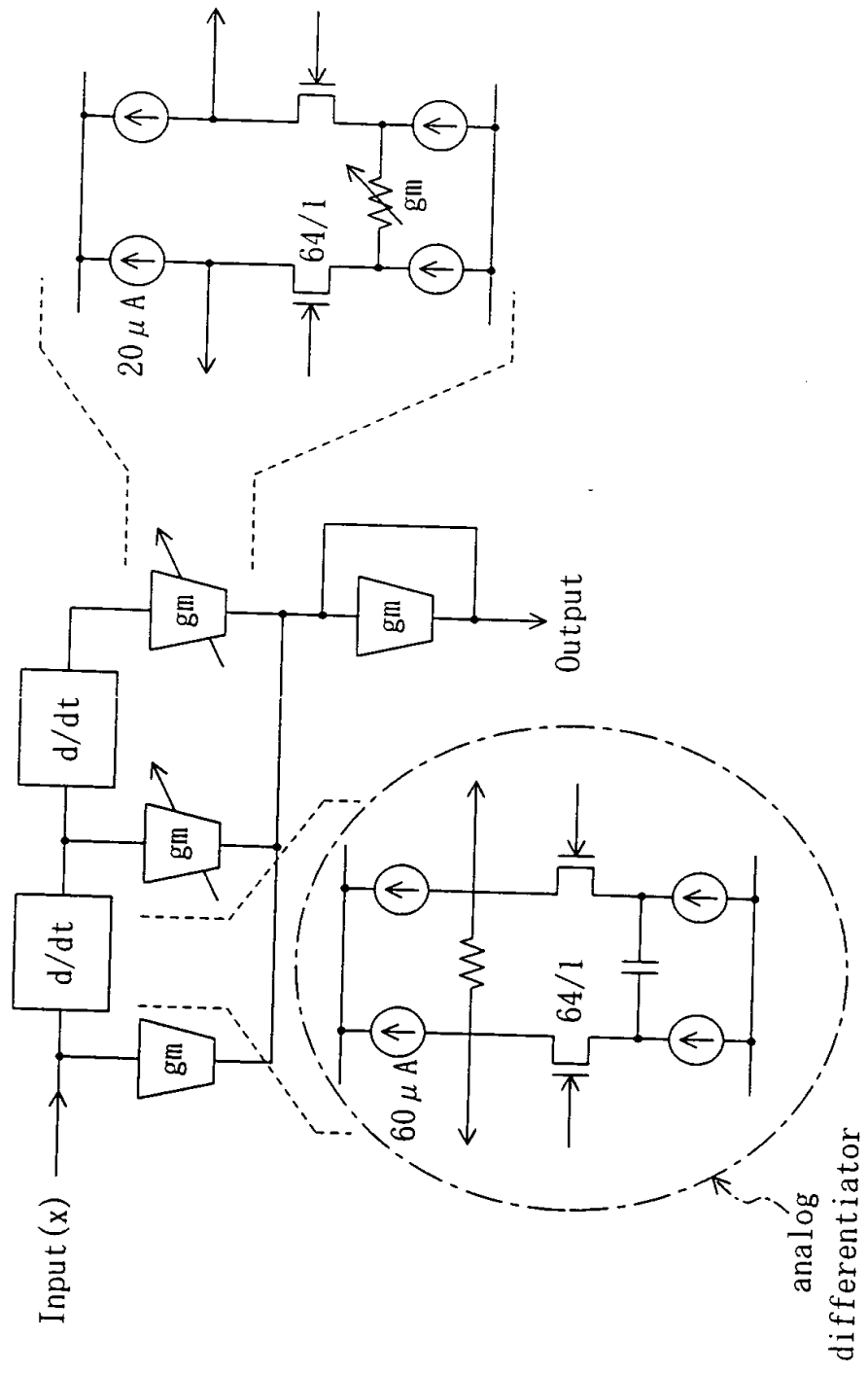


Fig. 11

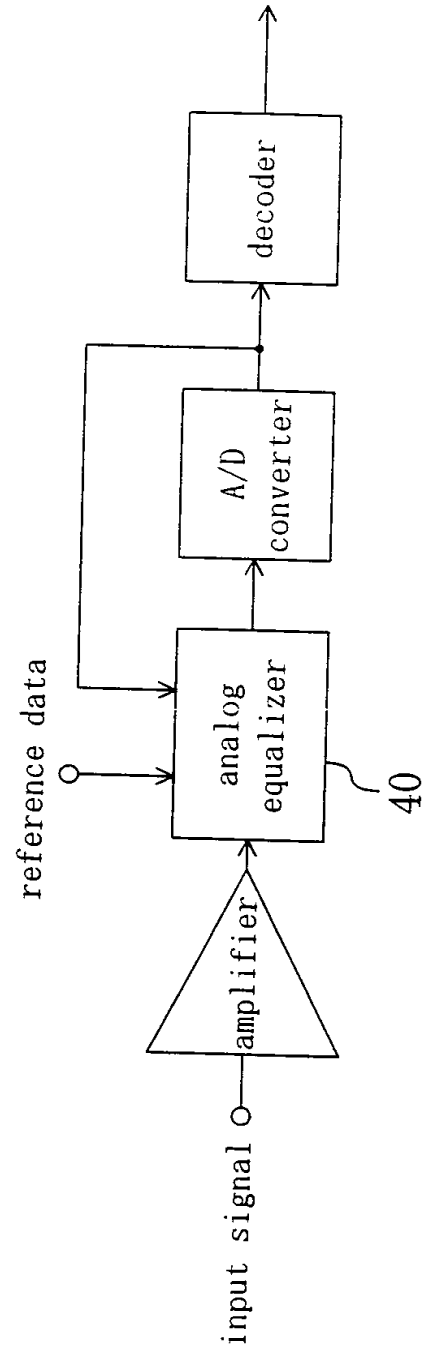


Fig. 12

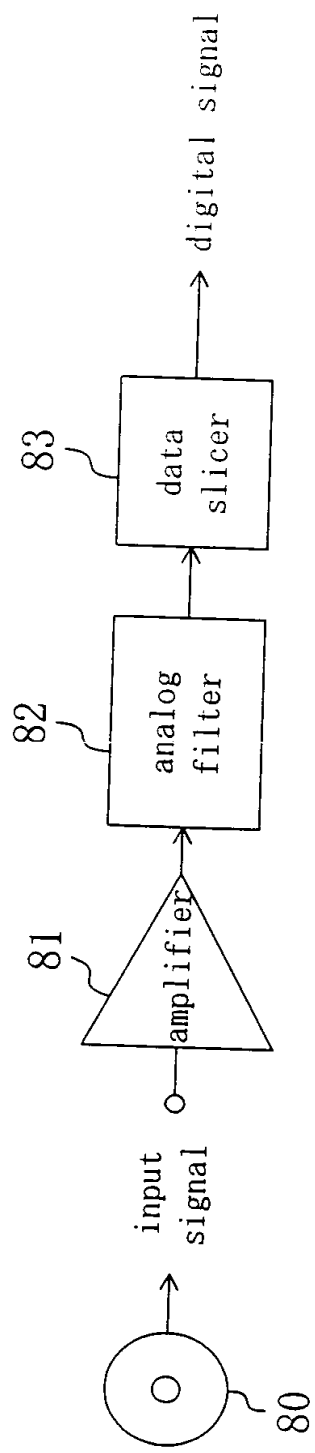


Fig. 13

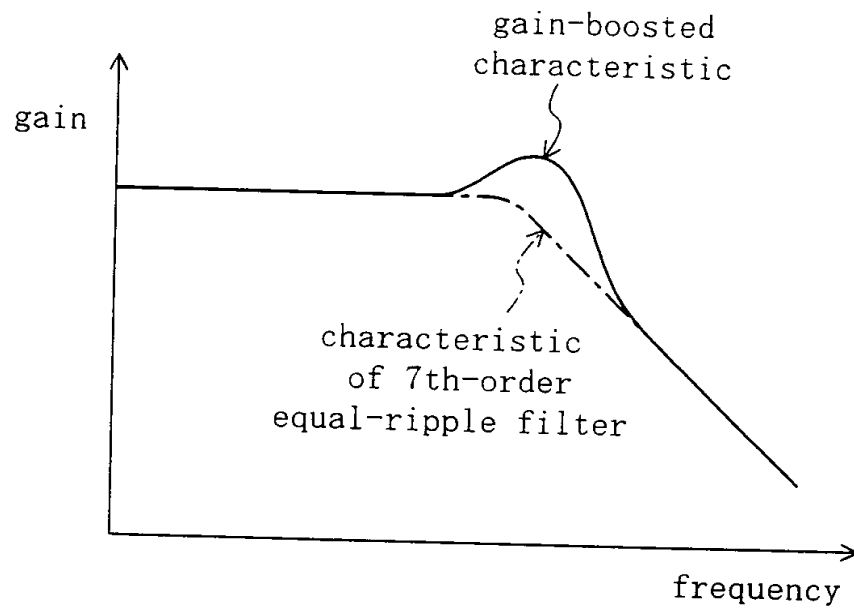


Fig. 14

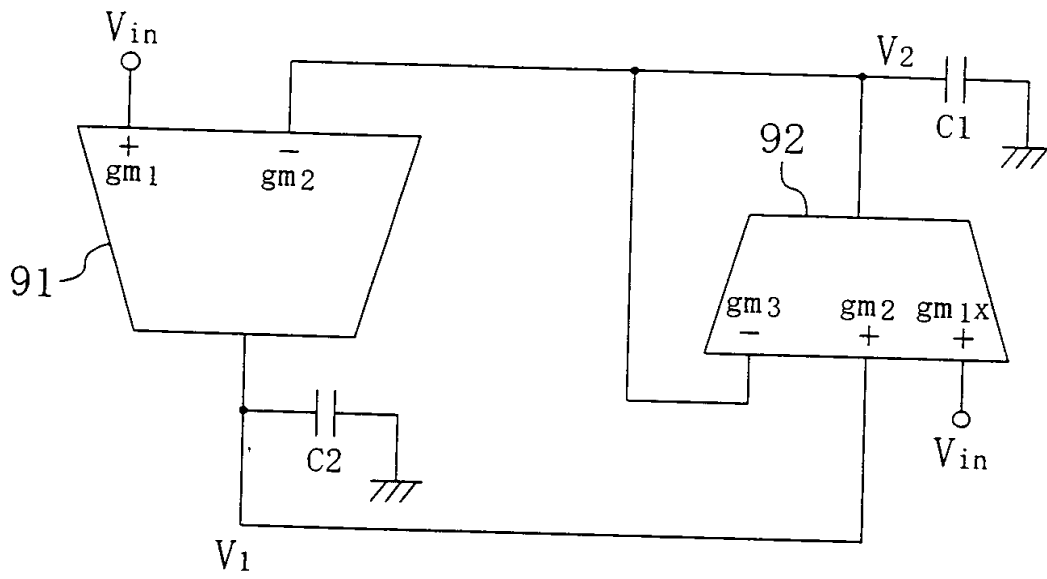


Fig. 15

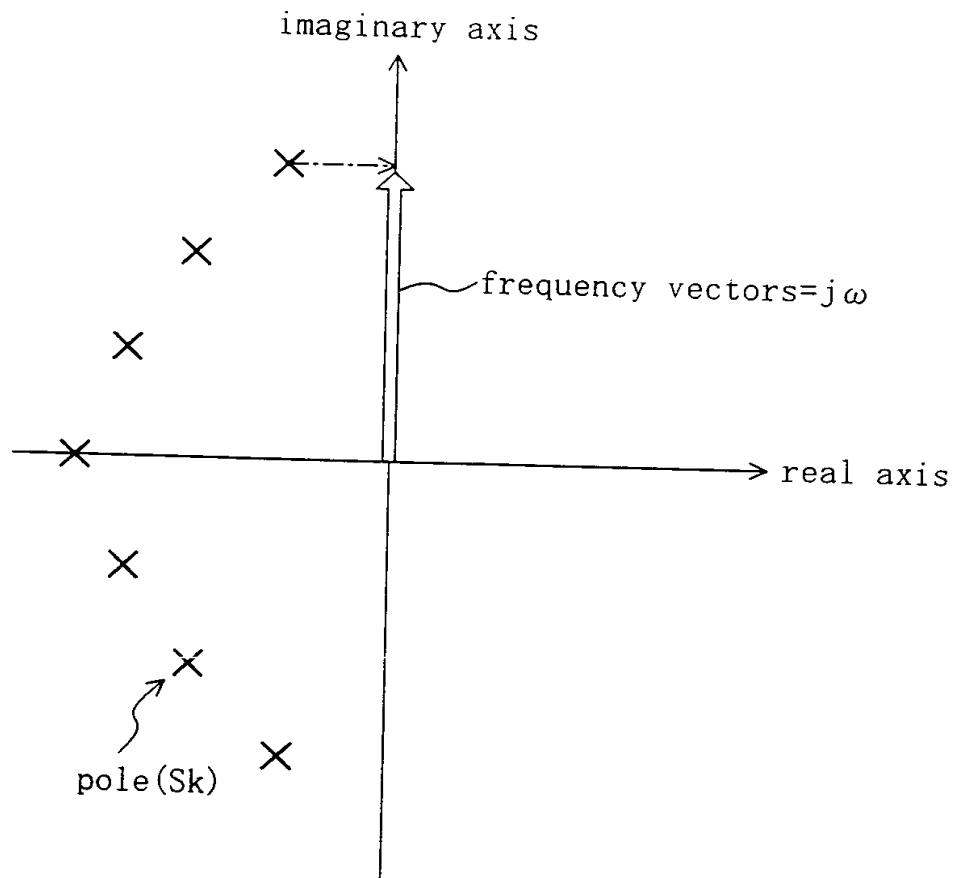
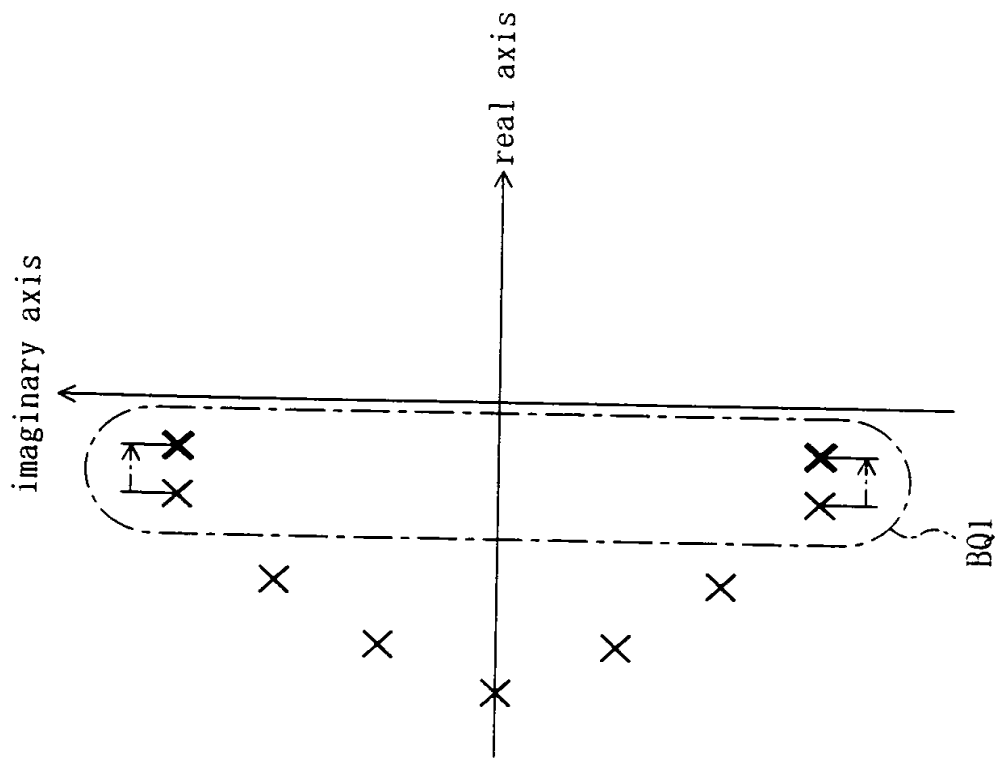
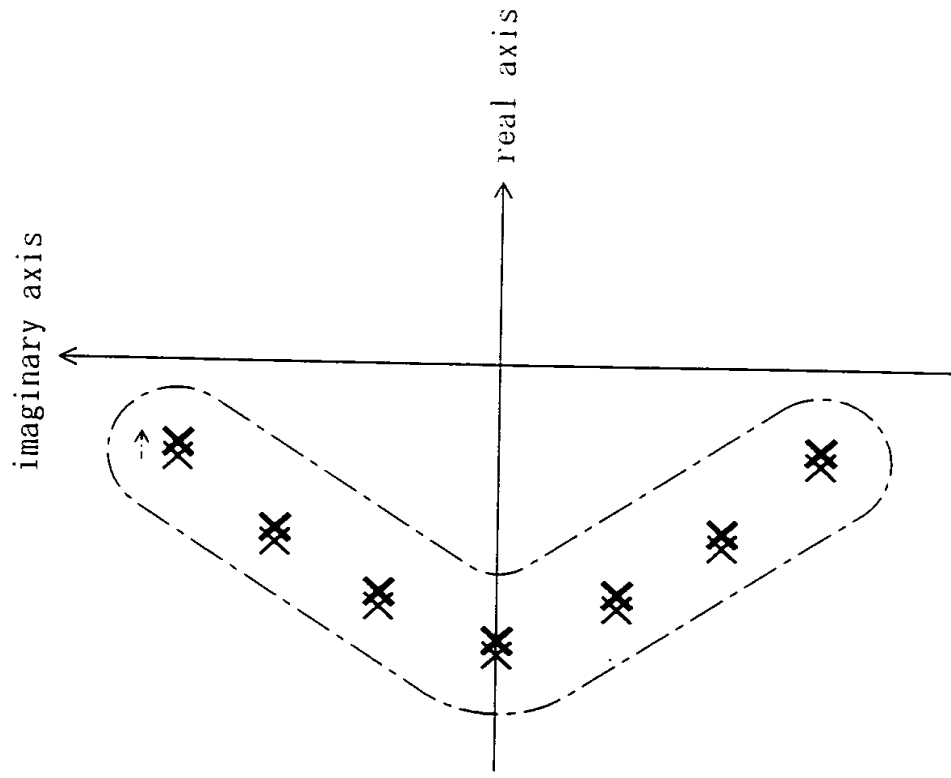


Fig. 16a



filter network of cascaded  
biquadratic filters

Fig. 16b



ladder filter